A COMBINED PACKAGING AND SHEATH FOR SHARP EDGED TOOLS

TECHNICAL FIELD OF THE INVENTION

The present invention relates to a packaging for a tool with sharp edge, in accordance with the preamble of patent claim 1.

BACKGROUND OF THE INVENTION

Cutting hand tools, such as wood chisels, mortise chisels, knives, cape chisels, shears, cutters, scissors, scrapers, screwdrivers, etc., are made with sharp edges which need protection in order not to damage or be damaged by other tools when stored or transported. When the tool is carried on the workplace it is also important that it can be carried with the edge protected, in order primarily not to hurt the user. Many types of protective packaging are known, where the edge is enclosed in the package or packaging while the handle protrudes, and, for use of the tool, it is extracted from the packaging by pulling the handle. Examples of such packaging are described in EP 911 124 and US 4,714,159. The packaging can for example be suspended from the belt of the user or from a hook on a wall.

If the package is to be used for displaying the tool at a retail outlet, it is required that the tool cannot easily be removed from the package, in part to discourage theft of the tool, and in part to make it less likely that an unskilled observer damages the tool by mishandling or dropping it. Several packaging are known where the tool cannot be extracted from the package until a seal has been broken or removed. Examples of such packaging are described in US 4,905,832, US 5,335,772 and US 5,850,916.

For tools having cutting edges there is also another desire, that a prospective buyer should be able to inspect the edge sharpness of a displayed tool visually and sensitively, to verify whether it can be used directly or after a final sharpening. Examples of such packaging are described in US 5,477,964

and US 5,501,330. However, these packaging are useless for protection when used, since the edge cannot be enclosed, and does not fill the requirement that the tool should not be easily removable when it is initially displayed.

To summarize, two main types of packaging are discerned: one type of packaging that is intended for display and protection during sale and one type of packaging intended for carrying, storing and/or protecting the tool after it has been sold, i.e. more or less during use in the sense that it is easily accessible and ready to be used by a user, and hereinafter referred to as a "user" packaging. The sales packaging is simply thrown away once the buyer has opened the packaging and withdrawn the tool, and the empty packaging has to be taken care of. Sometimes it may be recycled, but in many cases it is simply treated as waste. The "user" packaging is a separate item and has to be bought separately in most cases.

The use of two different packagings results in increased costs, unnecessary waste handling, and is also impractical.

SUMMARY OF THE PRESENT INVENTION

The purpose of the present invention is to solve the problems described above, by proposing a packaging for a tool with sharp edge, which packaging can be used both for sales exposure and as a "user" packaging.

This is achieved by means of a packaging according to the present invention, which includes the features defined in the characterizing part of patent claim 1.

Accordingly, the packaging comprises a protective sheath and means for supporting the tool in different positions on the sheath, including a first position adapted for sales exposure in which at least a major part of the tool is free of the sheath and exposed for inspection by a prospective buyer, and a second position in which the tool is inserted in the sheath and ready to be handled by a user.

Through the inventive packaging the advantage is obtained that the tool can be attached directly to the sheath, both in a sales position and a "user" position. No further packaging parts are required, such as a card or similar onto which the tool is fastened. In fact, the sheath constitutes the packaging in this case, with the only addition of some means for supporting the tool on the sheath. There is a first position that allows the tool with its handle to be inspected, apart from the edge, without removing the tool from the packaging. At the same time some extra space is made available for information about the tool or its origin, for example on the reverse side of the sheath from where the tool is located or on the same side where the tools is.

The second position allows the tool to be protected inside the sheath so that it will not contact persons or items even if roughly handled in a toolbox or by a user.

Advantageously, the tool is supported on the rear side of the sheath by a fastening device, in said first position.

According to one embodiment, the packaging is characterized in that said sheath comprises an upper sheath part, a lower sheath part and a bottom part, that an opening is provided in the rear side, between the lower sheath part and the bottom part, and into which opening an edge part of the tool may be inserted, for further penetration down into the bottom part, in order for the edge part to be protected by the bottom part in said first position.

Advantageously, the packaging comprises a resiliently deformable part projecting into said opening, at an upper side thereof, which is bent inwards into the lower sheath part while the bottom part is bent backwards when the edge part of the tool is inserted into said opening and further down into the bottom part. Thereby the advantage is achieved of a very secure way of supporting the tool on the sheath, reducing any risk of the tool edge becoming free and being able to cause damage or being damaged itself.

To continue, the bottom part may be resiliently connected to the lower sheath part, by means of a resiliently deformable part between the lower

sheath part and the bottom part, which allows for the bottom part to be resiliently bent relative to the lower sheath part, thereby making it possible for the edge part of the tool to be inserted in said opening and further into the bottom part. Thereby the same advantage as described above is acghieved, but in alternative embodiment.

In an advantageous embodiment, the suspension device is arranged at an upper end of the sheath and on the rear side. Preferably, the suspension device includes a clip arrangement by means of which it can be suspended from a user's belt when the tool is in its second position inside the sheath. By designing the sheath with a suspension clip, a very practical tool holster is obtained.

The suspension device may also include an opening by means of which it can be suspended on a hook, nail or similar suspension means.

According to another advantageous embodiment, the packaging is provided with a pilfer proof safety catch, which prevents removal of the tool from the packaging, in its first position, without visibly damaging the safety catch. The previously mentioned fastening device may function as said pilfer proof safety catch, or it can be a separate part.

According to an additional advantageous feature, the packaging may also comprise means for supporting said tool in a third position adapted for sales exposure, as an alternative to the first position, in which third position the tool is inserted in the sheath, and said packaging additionally being provided with a pilfer proof safety catch, which prevents removal of the tool from the sheath, without visibly damaging the safety catch.

Finally, the sheath, including all its parts, and the suspension device may advantageously be made in one piece.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will now be described in further detail, with reference being made to the accompanying schematic drawings, illustrating a preferred embodiments thereof, and in which:

- Figure 1 shows a perspective view, from behind, of a packaging with a tool in a first position, according to a first embodiment of the present invention,
- Figure 2 shows a perspective view, from behind, of a packaging with a tool in a first position, according to a second embodiment of the present invention,
- Figure 3 shows a perspective view, from behind, of a packaging with a tool in a second position, according to the present invention, and
- Figure 4 shows a front view of a packaging with a tool in a third position, according to the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The packaging illustrated in the figures comprises a sheath 1 with an upper sheath part 11, which can enclose part of the handle 15 of an inserted tool 2 with such a contact pressure that the friction is enough to prevent unintentional extraction of the tool. Furthermore, the sheath has a lower sheath part 12, which can enclose part of the tool, and a bottom part 13, which can enclose a sharp edge part 17 of the tool. The packaging is preferably made from a stiff resilient material such as a polymer.

The tool in the figures is illustrated as some type of chisel, but naturally it can be any type of tool having a fairly sharp edge that needs protection.

The sheath 1 has a front side 4 and a rear side 5. The front side is that side which is facing outward when the tool is inserted in the sheath and ready for use, in a "user" position, as illustrated in figure 3.

Between the lower sheath part 12 and the bottom part 13 there is an opening 18, in the rear side, of such size that at least part of the tool edge 17 can be inserted through the opening in the first position as shown in figure 1

and figure 2. The opening 18 should be shaped and oriented so that the edge part can be inserted only after deformation of a resiliently deformable part of the packaging.

According to a first embodiment, illustrated in figure 1, the resiliently deformable part is formed as a part 16, designed as a bridge, tab or flap, projecting into the opening 18, at an upper side thereof. This projecting part 16 is bent inwards into the lower sheath part 12 when the edge part 17 of the tool is inserted into the opening 18 and further down into the bottom part 13. According to a second embodiment, the resiliently deformable part can be the part 14 of the packaging connecting the lower sheath part 12 and the bottom part 13, as illustrated in figure 2. In this case the opening 18 is made accessible by bending the bottom part 13 slightly aside, i.e. backwards. When the respective resiliently deformable part 14,16 is in its original undeformed position, the opening is not accessible for insertion of the tool edge, and the sharp edge 17 cannot be enclosed by the bottom part 13. An embodiment combining the two resilient parts 14, 16 is also feasible.

At an upper end of the sheath 1, above the upper sheath part 11 and on the rear side 5, the packaging is provided with a suspension device 3, such as a resilient clip 19 for attachment to a belt of a user, a plate with a hole 20 for suspension on a wall peg or a display hook, or a combination of both. By designing the sheath with a suspension clip, a very practical tool holster is obtained.

To the upper sheath part or the suspension device is also attached a pilfer proof safety catch 21, which can be made in one piece with the rest of the packaging, or as a separate part snapped to the packaging in such a way that it cannot be removed without being visibly damaged. The safety catch illustrated in figure 1 and figure 2, and also the corresponding safety catch illustrated in figure 4, is designed as a loop or ring part 7 provided with snap means for insertion into holes 9 provided for this purpose in the suspension device. On the outwardly facing side of the ring part there is a connecting loop

part 8, directed upwards and forming a T with the ring part. The free end of the connecting loop part 8 is fastened to the upper part of the suspension device through an opening 20, in figure 1 and figure 2, which may be the opening that is provided for suspending the packaging from a hook or similar. In figure 4, with the tool inserted in the sheath, the connecting loop part 8 is instead fastened to the upper part of the suspension device through an opening 10. The ring part 7 of the safety catch encircles the lateral sides of the handle 15 and the connecting loop part 8 stretches over the top end of the handle 15. Instead of being formed as a ring, the ring part 7 may instead have two free ends provided with snap means for insertion into the holes 9.

The safety catch may also function as a fastening device for fastening the tool to the packaging in a sales display position, as illustrated in figure 1 and figure 2. Alternatively, a separate fastening device may be used, of any suitable kind known per se.

In figure 1 and figure 2 is illustrated a packaging, according to the present invention, used with the tool in a first position adapted for sales exposure.

Here, the tool is to be exposed with everything but part of the edge visible. The edge part 17 is inserted from the rear through the opening 18, the handle 15 is then turned or raised toward the upper sheath part 11, which causes either one of the deformable parts 14,16 to be deformed, according to the alternative embodiments illustrated in figure 1 and figure 2. If needed, the tool is then pressed down to make the edge 17 enclosed in the bottom part 13, as shown in figure 1 and figure 2. The safety catch 21 is then snapped into place to prevent removal of the tool from the packaging. As can be seen, the rear side of the sheath is thus used for supporting the tool in a first position, adapted for sales display.

When the tool has been sold and the buyer wishes to utilise the tool, the safety catch 21 is broken and removed, and the tool 2 can be loosened from the packaging by pulling the handle. The alternative resiliently deformable

parts 14,16 then return to their original undeformed positions, and the opening 18 is no longer accessible. The buyer may then insert the tool into the sheath, now constituting a "user" packaging as described above and referred to as the second position, and the edge will be fully enclosed and protected by the bottom part 13, as shown in figure 3, and also the major part of the rest of the tool will be enclosed by the sheath.

The packaging/sheath can then be suspended from the belt of the user or put in a toolbox without the risk of clothes or other tools being damaged by the edge.

If desired, the tool can of course also be displayed for sale with the tool 2 inserted into the sheath 1 and the safety catch 21 mounted over the handle part, as illustrated in figure 4 and in this description referred to as a third position.

Within the scope of the invention, the respective resiliently deformable parts can be of different designs, integrated with the rest of the packaging or as a separate resilient element. The upper and lower sheath parts 11,12 and the bottom part 13 can preferably be provided with holes or perforations to let dust, chips and particles drop out of the packaging.

The present invention shall not be considered as limited to the illustrated embodiments, given as examples only, but may be varied and modified in numerous ways within the scope of the appended patent claims.